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H4T TDAA T121

(56) Documents Cited
GB 2149627 A **GB 2140958 A** **EP 0589620 A2**
EP 0478926 A2 **EP 0148378 A2** **US 5289288 A**

(58) Field of Search
UK CL (Edition N) **H4F FBA FDC , H4T TDAA**
Online: WPI

(54) Multi-lingual television; recording a plurality of television programmes simultaneously; dial-up television

(57) A multi-lingual television system may have a plurality of different language sound tracks 1 . . n and a plurality of different language text tracks a . . x transmitted in parallel with the video frames; alternatively (figure 2) the sound and text tracks may be time multiplexed with the video frames. The user may select which language sound and text is to be used.

A plurality of television programmes may be recorded simultaneously, possibly under the control of a control signal 0 transmitted with the video signal.

The whole system may operate as dial-up television in which the user dials up a channel for viewing on demand.

The system may be provided on a circuit board for plugging into a computer.

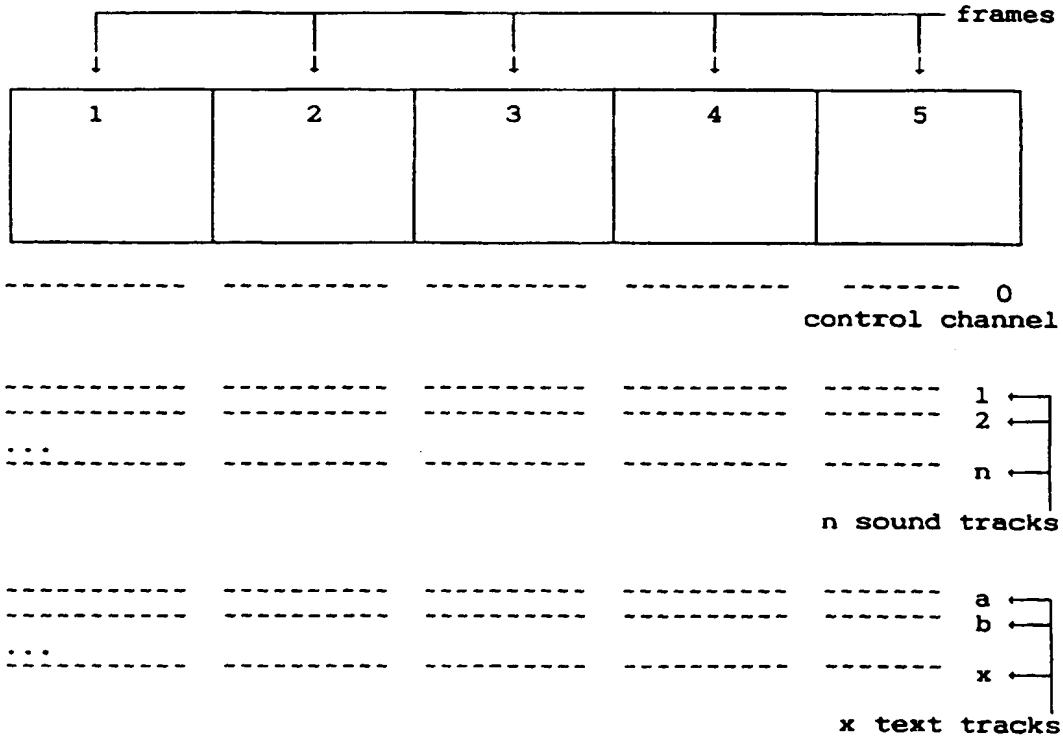

fig 1

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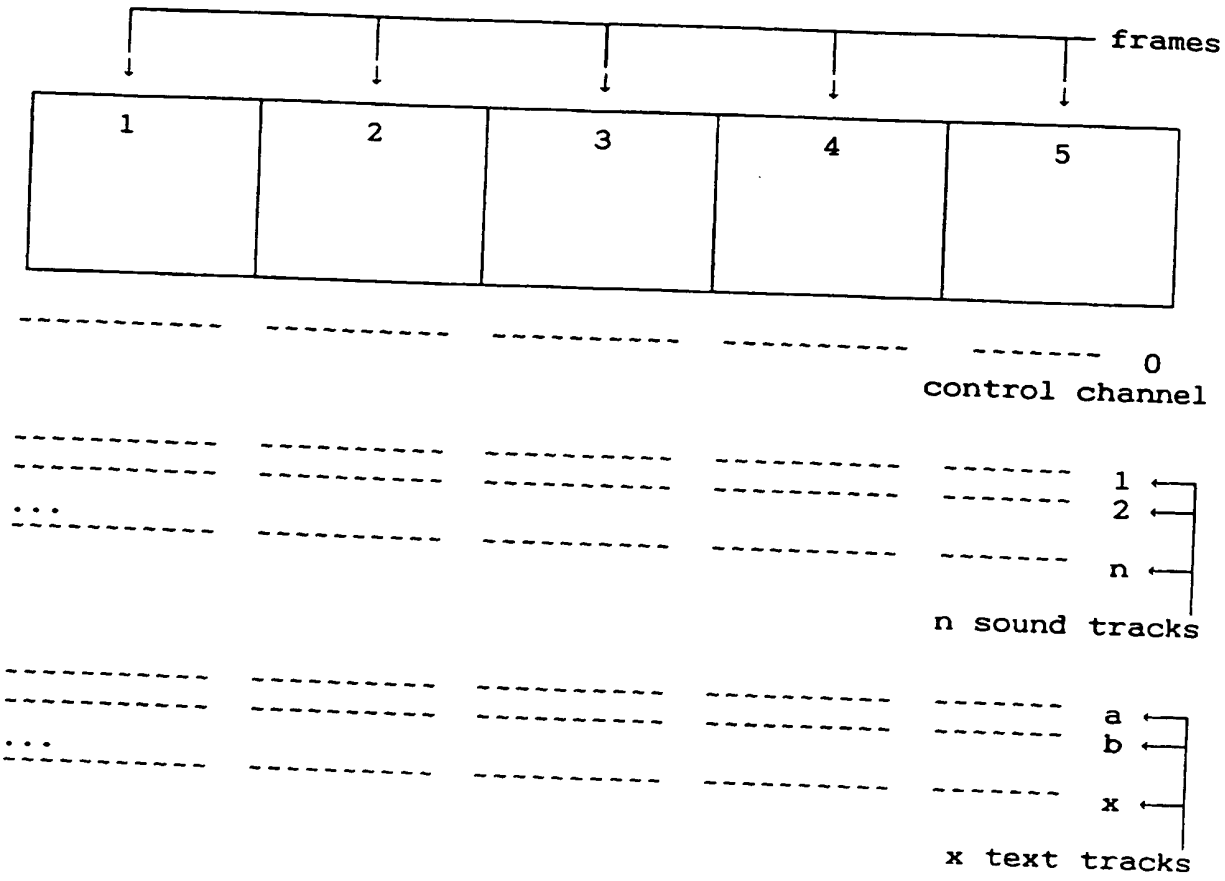
frames
1
2
3
4
5
0
control channel
1
2
n
n sound tracks
a
b
x
x text tracks

fig 1

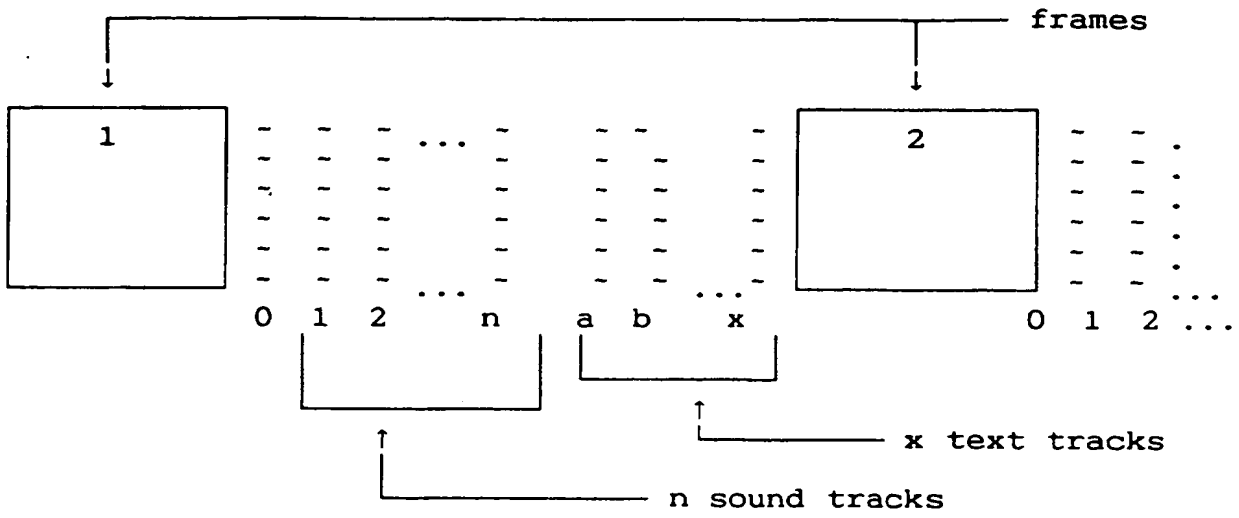

fig 2

Block diagram

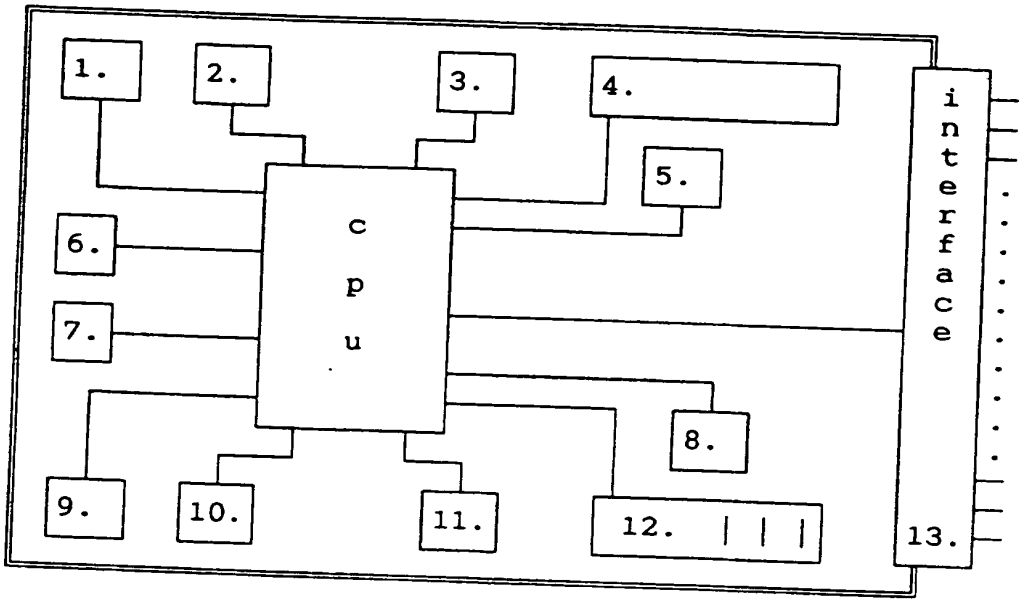

fig 3

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Improved Television System

A system designed for an improved television transmission, reception and recording means incorporating multi-lingual operation, multi-channel recording, dial up tv.

Current television programs are geared to a single sound track. The recording of such programs on video is similarly with a single sound track.

When people travel abroad they can acquire a tv but face the difficulty of incomprehensible sound track. Similarly they can hire a video with the same complication.

Producers of all types of programs films, documentaries, arts, comedy et al face the problem of dubbing the program in a different language resulting in a variety of releases. Live programs cause a particular nuisance. International events have a variety of language commentaries but in any one country only one is available.

People are moving around in larger numbers and more often. The need for a comprehensible television channel when abroad is evident and rising. It is no more apparent than within the EU.

The system described herein uses the improvements in technology to transmit, record such programs with a multiplicity of language tracks. Whereby the production chore of different releases for each language, at least reduced and possibly eliminated completely. In the case of the viewer regardless of where he is the choice of the language is open for selection from the possible choices offered by the program, film producer, transmitting company.

With the increase in channels via satellites and cable the users have a greater and greater choice with possibly cover of home channels when abroad. The viewer however is still restricted in his choice, he may prefer a foreign program but without comprehension.

Further the increases in the number of channels has resulted in mesmerizing the viewer with the available choice. At any one time how many can one possibly view or video record. Selection itself is practical problem. With choice from such a large variety some useful programs are inevitably missed, only discovered the day, week after. Channels resorting to repeating the programs, not a very suitable way to fill the air.

The technique employed here can also be used to transmit, receive, record textual messages in different languages, messages such as textual dubbing, scores, results, tables, program headers, footers and the like.

The producers investment is lost due to piracy. One a film has been released a plethroa of pirate copies proliferate the market, which is impossible to detect.

State of the art technology now permits transmission at such high speeds that the viewers ability to view is the restricting factor.

Satelite tv, cable tv, mobile phone network, optical cable network now provide the opportunity of dedicating,leasing a channel for specific program, film and the like. The viewer would dial up a channel on demand for viewing. Since the channel capacity is available any way, the cost of leasing, dedicating should be low, to the viewer the cost would be less than the hire of a video, for the producer the threat of piracy is elliminated.

With reference to fig 1. The effect of a multi-lingual program can be achieved by transmitting the sound tracks 1..n synchronised with the picture frame in independent channels. The number of sound tracks transmitted in this manner are limitless. An alternative scheme is shown in fig 2 here the sound tracks are transmitted on the same channel interleaved amongst the picture frames.

A channel (0) or channels can be reserved for control signals to operate the recording, tv system under both schemes fig 1 & 2.

A channel or channels (a,b..x) can be reserved for multi-lingual textual messages under both schemes fig 1 & 2.

The number of channels for control, sound and text may be increased, decreased, interchanged, altered, temporarily, permanently on a real time basis to accommodate different conditions.

Both schemes can be used to achieve multi-lingual broadcasts in a manner that is transparent to the existing broadcasts thereby permitting the use of the existing tv, recording systems in the normal way.

The same schemes can be used to indicate the type of program on offer enabling the recording embodiment to activate, deactivate, adjust it's operation.

An embodiment of a television reception system with the capability to pick a different language track for sounding with the current frames. The user would interact with the tv system through switches to select the language of interest or preferably through the remote control which would bring up a menu on the screen for the user to choose from. Such choices may be stored for subsequent use with regard to the time, channel or program.

An embodiment of a television reception unit operating under the transmission on the control channel.

An embodiment of a television reception unit operating under the dial up channel, offered on the cable tv, satelite tv, optical cable phone network, traditional phone network, mobile phone network.

An embodiment of a television reception system with switches and or a remote control interface to permit usage of the multi-lingual broadcast.

An embodiment of a remote control unit to operate a multi-lingual television reception system.

An embodiment of a television reception system with suppress the sound from the broadcast under the current art and generates the sound track currently selected by the user, indicated by the channel, program, time memory.

The video recorder would record such programs in similar fashion, the number of sound,text tracks recordable will depend on size of the tape and the quality of the read/write head. As technology improves more and more text,sound tracks will be recordable.

A new tape size can be used to maximise sound track recordings. This will cause incompatibility with the existing standard video cassette. The solution is to design a video recording/playing unit embodiment which accepts both the traditional cassette and the new cassette. The recorder would effectively have dual operating capability.

The existing standard vhs video cassette can be used to permit usage with existing video players. The recording technique employed should be such that it does not interfere with use of the cassette under current art. One method would be to record the text,sound tracks on the vacant side of the tape. To a person skilled in the art other choices will be apparent.

The recording/playing unit embodiment here will also have dual operating capability. To play the cassette under the traditional method or to oppress the sound from the traditional recording and play the sound track selected. The picture image will effectively be merged with the selected sound track before transmission to the tv/monitor/screen. Alternatively the additional sound track and the picture images can be sent directly to the tv/ monitor/ screen without modification, here the display unit performing required function of suppressing one sound track in favour of the selected one.

A recording/playing unit embodiment based on optical disks, magnetic disks may be built. Here there would be no restrictions on the technique to be employed. However for compatibility international standards would have to be followed.

An embodiment of a recording/playing unit which uses one of or a combination of recording medias, such as the existing vhs video cassette, a new cassette with a new size and new format, magnetic disks, optical disks, memory cards.

An embodiment of a recording/playing unit which permits easy change of the recording media.

An embodiment of a recording/playing unit which uses the existing vhs video cassette under the traditional art and where the new multilingual recording is transparent to the current art.

An embodiment of the recording unit whose recording function is activated, deactivated, altered from a signal on the control channels(0), Sound channels (1..n), text channels(a..x).

An embodiment of a recording/playing unit with the capability to record from a multiplicity of channels simultaneously.

An embodiment of a recording/playing unit with large storage media to record from a multiplicity of channels simultaneously to cover long periods days,weeks.

An embodiment of a recording/playing unit operating under the transmission on the control channel.

An embodiment of a recording/playing unit with switches and or a remote control interface to permit usage of the multi-lingual recording/playing.

The user would interact with the recording system through switches to select the language of interest or preferably through the remote control unit. Both means would bring up a menu on the tv/monitor/screen and or on the videos own display unit for the user to choose from. Such choices may be stored for subsequent use with regard to time, channel or program.

An embodiment of a remote control unit to operate a multi-lingual recording/playing system.

An embodiment of an integrated remote control unit to operate a multi-lingual television reception system and a recording/playing system.

An embodiment of an integrated system incorporating the television reception unit and recording/playing unit as described above.

The essential functions of the reception system described herein can be incorporated into a dedicated integrated electronic circuit board fig 3, some other add on board, a mother board and thereby give the computer, tv, electronic equipment using or made from such a board all the functions as herein described.

Such a board would give a host computer a tv reception, and recording,playing means and permit a limitless variations on the use through software. Such a board would save the users investment in a computer.

The add on card may be de-installed and installed on a new or different computer system permitting clients to upgrade or change their systems at will or for carriage during travel.

To enable,disable, activate an interface or function, to program, adjust, enhance, modify, the software functions, the hardware functions, the operational characteristics for any of the interfaces for the systems, the operator will be able to:

set, reset the physical series of dip switches, set, reset, adjust the software switches via a software control module, add or delete software switches, modify the function of software switches by upgrading the control module specifically or the operating system software generally.

and thereby exercise complete control over the functioning and operating characteristics for the systems.

The application of the systems in a specific environment may alter, increase or decrease the number, variety and combination of interfaces and software functions required but continue to operate and achieve the objective of an improved television systems as herein described and fall within the scope of the originality, inventiveness and intellectual property described herein.

An embodiment of the systems may be built incorporating combinations and permutations of the embodiments, functions described above. Solving some of the problems described thereby reflecting on the operating requirements.

A connected, networked system may be designed to provide the advantages described by sharing the system resources. Such an application for the use of people in close affinity like flats.

The improvements described herein can be implemented on any tv transmission means : traditional wireless tv, cable tv network, satellite tv network, dial up tv, or any new tv transmission technique.

Fig 3 ICB

1. singular / plural antenna interface for transmission/ reception
2. tv aerial input/output
3. optical cable input/ouput
4. modem input/output
5. plurality of rom chips
6. battery
7. clock
8. plurality of ram chips
9. plurality of cmos chips
10. vacant encoding,decoding,rom... chip slots.
11. vacant interface chip slots.
12. plurality of dip switches
13. interface into the host computer bay and power pins

No restriction is implied on the number, variety or lay out of the chips and/or interfaces on the board, the diagram is an illustration for a person skilled in the art of integrated circuitry, such a skilled person can vary the design in a limit less way but retain the essential functions described herein.

Further no restriction is implied upon the size of the add on card it may be as small and compact as technology permits, or as large and wide to permit easy installations.

Claims

1. A system designed for an improved television transmission, reception and recording means incorporating multi-lingual operation, multi-channel recording, dial up tv.

2. A transmission system according to claim 1 transmitting control data on the control channel (0) or channels, multi-lingual text channels (a,b..x), multi-lingual sound tracks 1..n synchronised with the picture frame in independent channels, under scheme from fig 1 or fig 2.

3. A transmission system according to the preceding claims where the number of channels for control, sound and text may be increased, decreased, interchanged, altered, temporarily, permanently on a real time basis to accommodate different conditions.

4. A Dial up transmission system according to the preceding claims tv where a dedicated channel is leased from satelite tv, satelite network, cable tv, mobile phone network, optical cable network for the transmission of a specific program, film and the like, the viewer would dial up a channel on demand for viewing.

5. An embodiment of a television reception system according to the preceding claims with the capability to pick a different language track for sounding with the current frames,the user interacting with the tv system through switches to select the language of interest or preferably through the remote control, the user choosing from a menu on the screen, Such choices stored for subsequent use with regard to the time, channel or program.

6. An embodiment of a television reception unit according to the preceding claims operating under the transmission on the control channel.

7. An embodiment of a television reception unit according to the preceding claims operating under the dial up tv techique.

8. An embodiment of a television reception unit according to the preceding claims operating under the dial up channel, offered on the cable tv, satelite tv, optical cable phone network, traditional phone network, mobile phone network.

9. An embodiment of a television reception system according to the preceding claims with switches and or a remote control interface to permit usage of the multi-lingual broadcast.

10. An embodiment of a remote control unit according to the preceding claims to operate a multi-lingual television reception system.

11. An embodiment of a television reception system according to the preceding claims which suppress the sound from the broadcast under the current art and generates the sound track currently selected by the user, indicated by the channel, program, time memory.

12. An embodiment of a recording/playing unit according to the preceding claims which uses one of or a combination of recording medias, such as the existing vhs video cassette, a new cassette with a new size and new format, magnetic disks, optical disks, memory cards.

13. An embodiment of a recording/playing unit according to the preceding claims operating under the dial up tv technique.

14. An embodiment of a recording/playing unit according to the preceding claims which uses the existing vhs video cassette under the traditional art and where the new multilingual recording is transparent to the current art.

15. An embodiment of the recording unit according to the preceding claims whose recording function is activated, deactivated, altered from a signal on the control channels(0), Sound channels (1..n), text channels(a..x).

16. An embodiment of a recording/playing unit according to the preceding claims with the capability to record from a multiplicity of channels simultaneously.

17. An embodiment of a recording/playing unit according to the preceding claims with large storage media to record from a multiplicity of channels simultaneously to cover long periods days,weeks.

18. An embodiment of a recording/playing unit according to the preceding claims operating under the transmission on the control channel.

19. An embodiment of a recording/playing unit according to the preceding claims with switches and or a remote control interface to permit usage of the multi-lingual recording/playing system.

20. An embodiment of a remote control unit according to the preceding claims to operate a multi-lingual recording/playing system.

21. An embodiment of an integrated remote control unit according to the preceding claims to operate a multi-lingual television reception system and a recording/playing system.

22. An embodiment of an integrated system according to the preceding claims incorporating the television reception unit and recording/playing unit as described above.

23. A dedicated integrated electronic add on board fig 2, some other add on board, a mother board to give the computer, electronic equipment using or made from such a board all the functions, operations, applications and advantages claimed in the preceding claims and described in the description.

24. The application of singular,plural, stand alone or networked system or systems as claimed in the preceding claims in a specific environment or embodiment may alter, increase, decrease the number, variety and combination of interfaces required and software functions performed to comply with the requirements of the institution, establishment, to ensure the design is efficient, productive , secure and continue to operate and achieve the essential objective of providing an improved and efficient television means according to the preceding claims with the advantage of shared resources.

25. To enable,disable, activate an interface or function, to program, adjust, enhance, modify, the software functions, the hardware functions, the operational characteristics for any of the interfaces for the system or systems claimed in the preceding claims, the user will be able to:

    set, reset the physical series of dip switches, set, reset, adjust the software switches via a software control module, add or delete software switches, modify the function of software switches by upgrading the control module specifically or the operating system software generally,

and thereby exercise complete control over the functioning and operating characteristics for the system.

26. The improvements, advances, advantages described and claimed in the preceding claims for implemention on any tv transmission means: traditional wireless tv, cable tv network, satellite tv network, dial up tv, or any new tv transmission technique.

27. A system substantially as described, with reference to the drawings, which forms a sub set or a super set of the system described.

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Patents Act 1977
Examiner's report to the Comptroller under Section 17
(The Search report)

Application number
GB 9504342.8

Relevant Technical Fields

(i) UK Cl (Ed.N) H4F (FBA, FDC); H4T (TDAA)

(ii) Int Cl (Ed.)

Search Examiner
M K REES

Date of completion of Search
4 MAY 1995

Databases (see below)
(i) UK Patent Office collections of GB, EP, WO and US patent specifications.

(ii) ONLINE DATABASE: WPI

Documents considered relevant following a search in respect of Claims :-
1 to 27

Categories of documents

X: Document indicating lack of novelty or of inventive step.

Y: Document indicating lack of inventive step if combined with one or more other documents of the same category.

A: Document indicating technological background and/or state of the art.

P: Document published on or after the declared priority date but before the filing date of the present application.

E: Patent document published on or after, but with priority date earlier than, the filing date of the present application.

&: Member of the same patent family; corresponding document.

Category	Identity of document and relevant passages		Relevant to claim(s)
X	GB 2149627 A	(PHILIPS) see abstract	1, 6, 26
X	GB 2140958 A	(NIPPON VICTOR KK) see abstract	1, 12, 16 17, 26
X	EP 0589620 A2	(AT & T) see abstract	1, 4, 7, 8 26
X	EP 0478926 A2	(GRUNDIG EMV) see abstract: also WPI Abstract Accession No. 92-115765/15	1, 5, 9, 10-12, 14 20-22, 26
X	EP 0148378 A2	(VICTOR CO OF JAPAN) see abstract	1, 12, 16 17, 22, 26
X	US 5289288	(MTI ASSOCIATES) see abstract; also Figure 5	1, 4, 5, 7 9, 11-14, 19 22, 26

Databases: The UK Patent Office database comprises classified collections of GB, EP, WO and US patent specifications as outlined periodically in the Official Journ (Patents). The on-line databases considered for search are also listed periodically in the Official Journal (Patents).